\$A5:sas 04/15/04 269908 PATENT

Attorney Reference Number 899-61868 Application Number 10/019,165

## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims:

Claim 1 (currently amended): A method for enhancing hematopoiesis in a subject deficient in hematopoiesis, comprising:

transplanting at least a therapeutically effective portion of [a] an isolated adult vascular tissue into a subject deficient in hematopoiesis, wherein the isolated adult vascular tissue enhances hematopoiesis in the subject.

Claim 2 (currently amended): The method of claim 1, wherein the isolated <u>adult</u> vascular tissue is autologous vascular tissue.

Claim 3 (currently amended): The method of claim 1, wherein the isolated <u>adult</u> vascular tissue is heterologous vascular tissue.

Claim 4 (currently amended): The method of claim 1, wherein the subject is deficient in hematopoiesis is deficient in hematopoiesis due to irradiation.

Claim 5 (original): The method of claim 1, wherein the subject is deficient in hematopoiesis due to a genetic immunodeficiency, irradiation, chemotherapy, or neutropenia.

Claim 6 (original): The method of claim 1, wherein the portion of the isolated vascular tissue is a portion of an artery or a vein.

Claim 7 (currently amended): The method of claim 1, wherein the portion of the isolated vascular tissue is a portion of a vena cava, a thoracic aorta, a smaller an artery, a smaller vein, or a capillary of a microvascular circulation.

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Claim 8 (previously presented): The method of claim 1, wherein hematopoiesis is enhanced by a cell or factor provided by the transplanted vascular tissue.

Claim 9 (original): The method of claim 1, wherein the subject is a mammalian subject.

Claim 10 (original): The method of claim 9, wherein the subject is a mouse, a human, a monkey, a cow, a pig, a sheep, a rat, or a rabbit.

Claim 11-22 (withdrawn).

Claim 23-26 (canceled).

Claim 27-36 (withdrawn).

Claim 37 (original): The method of claim 1, wherein the vascular tissue is transplanted under the kidney capsule.

Claim 38 (original): The method of claim 1, wherein the vascular tissue is transplanted intraperitoneally or subcutaneously.

Claim 39 (original): The method of claim 1, wherein the vascular tissue does not form an enclosed lumen.

Claim 40 (original): The method of claim 1, further comprising assaying hematopoiesis in a sample from the subject.

Claim 41-43 (canceled).

Claim 44 (currently amended): The method of claim 20 1, wherein the isolated adult vascular tissue is at least comprises a portion of an artery or vein.

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Claim 45 (currently amended): The method of claim  $20 \, \underline{1}$ , wherein the subject is a non-human animal subject.

Claim 46 (canceled).